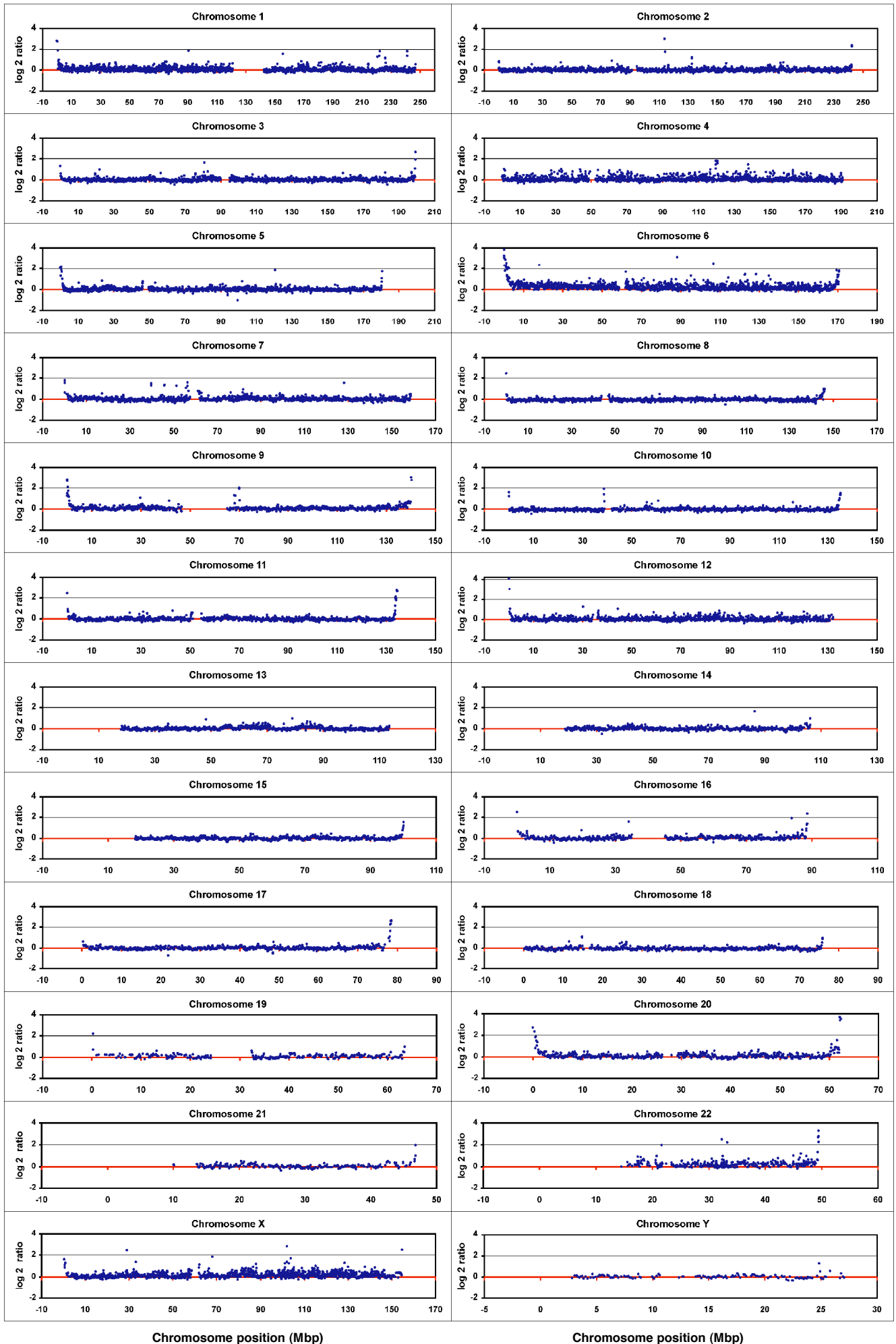


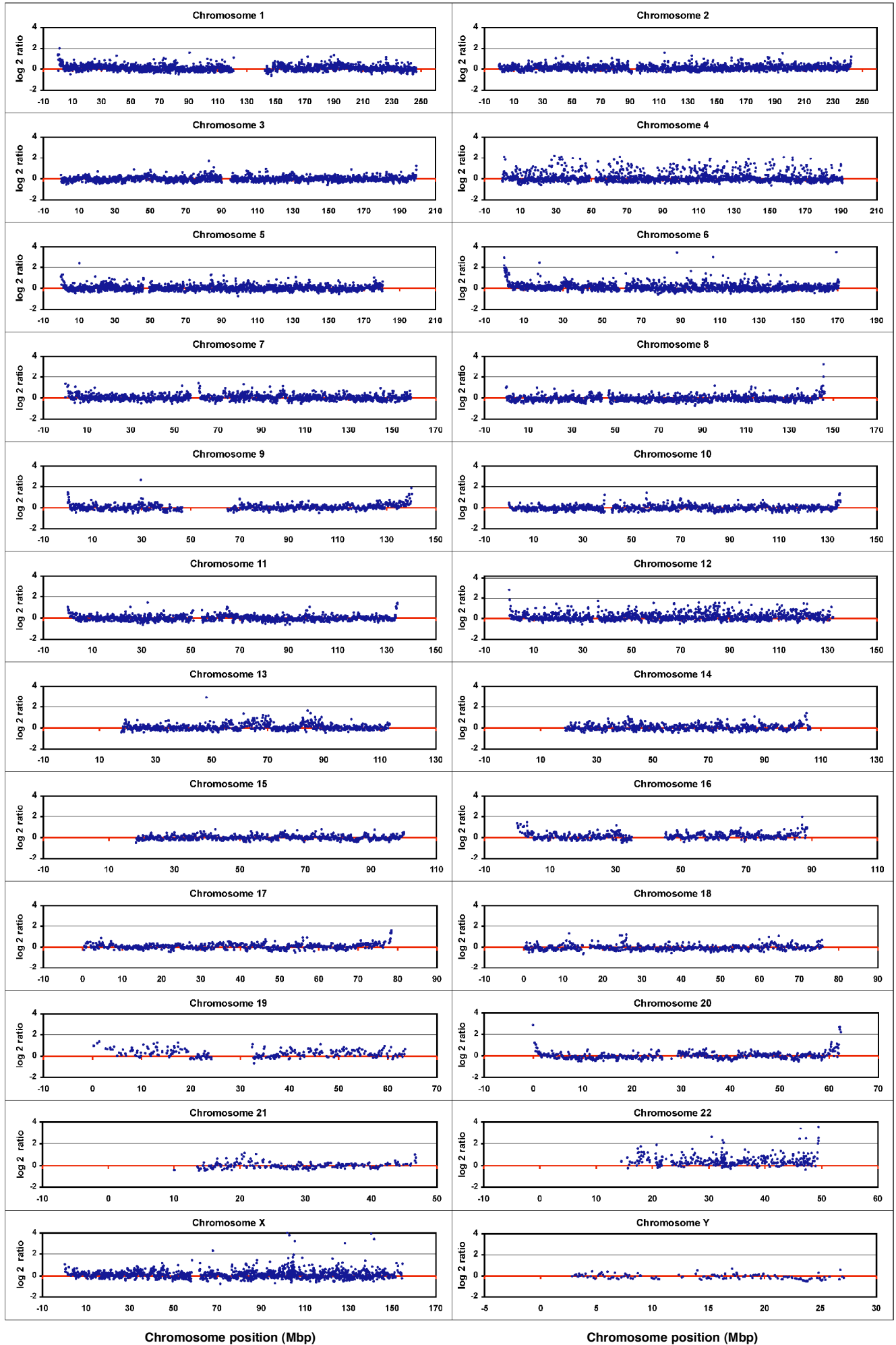
**Figure S1: ChIP-chip analysis of senescent BJ fibroblasts with anti- $\gamma$ H2AX**



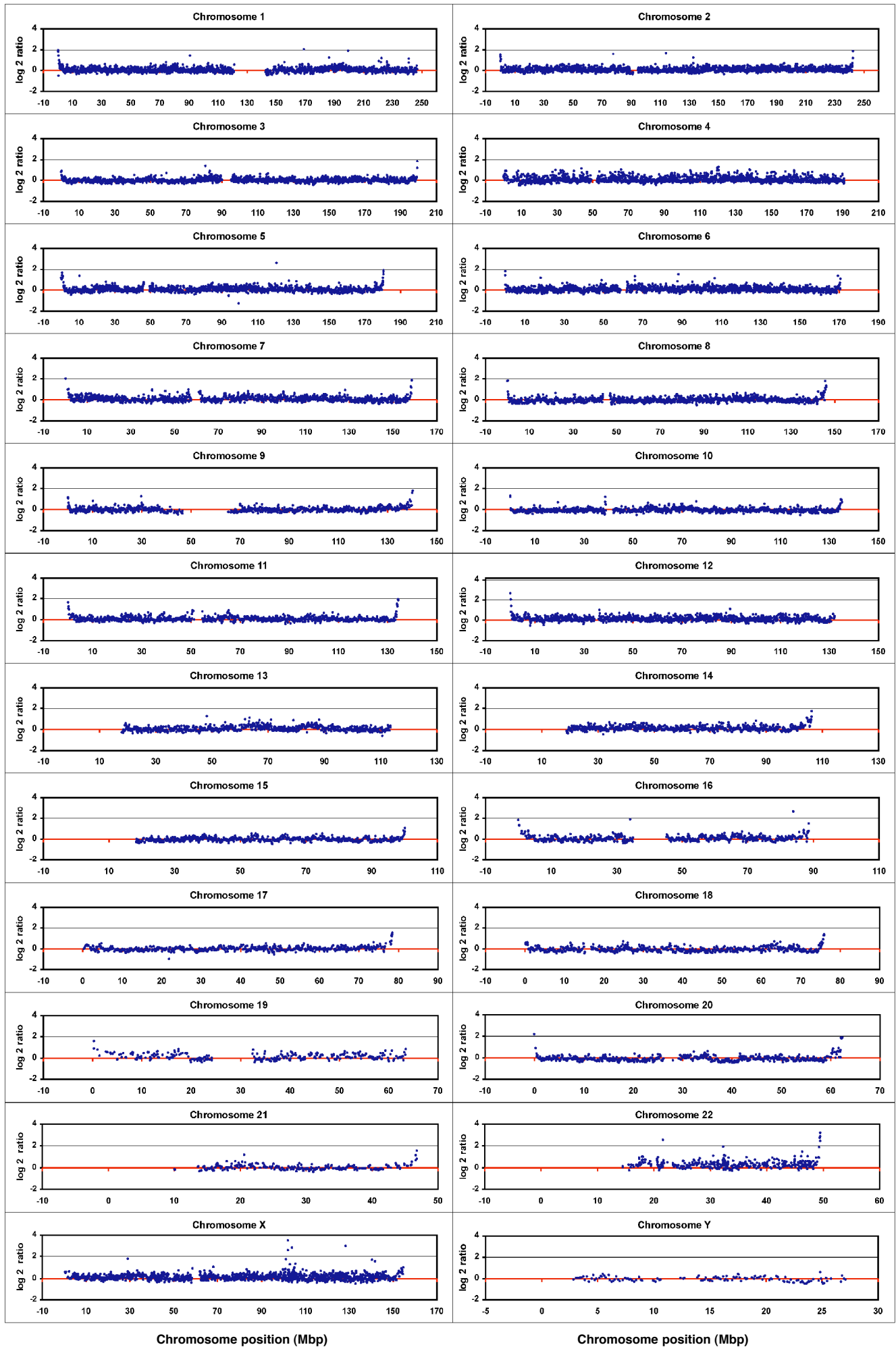
Chromosome position (Mbp)

Chromosome position (Mbp)

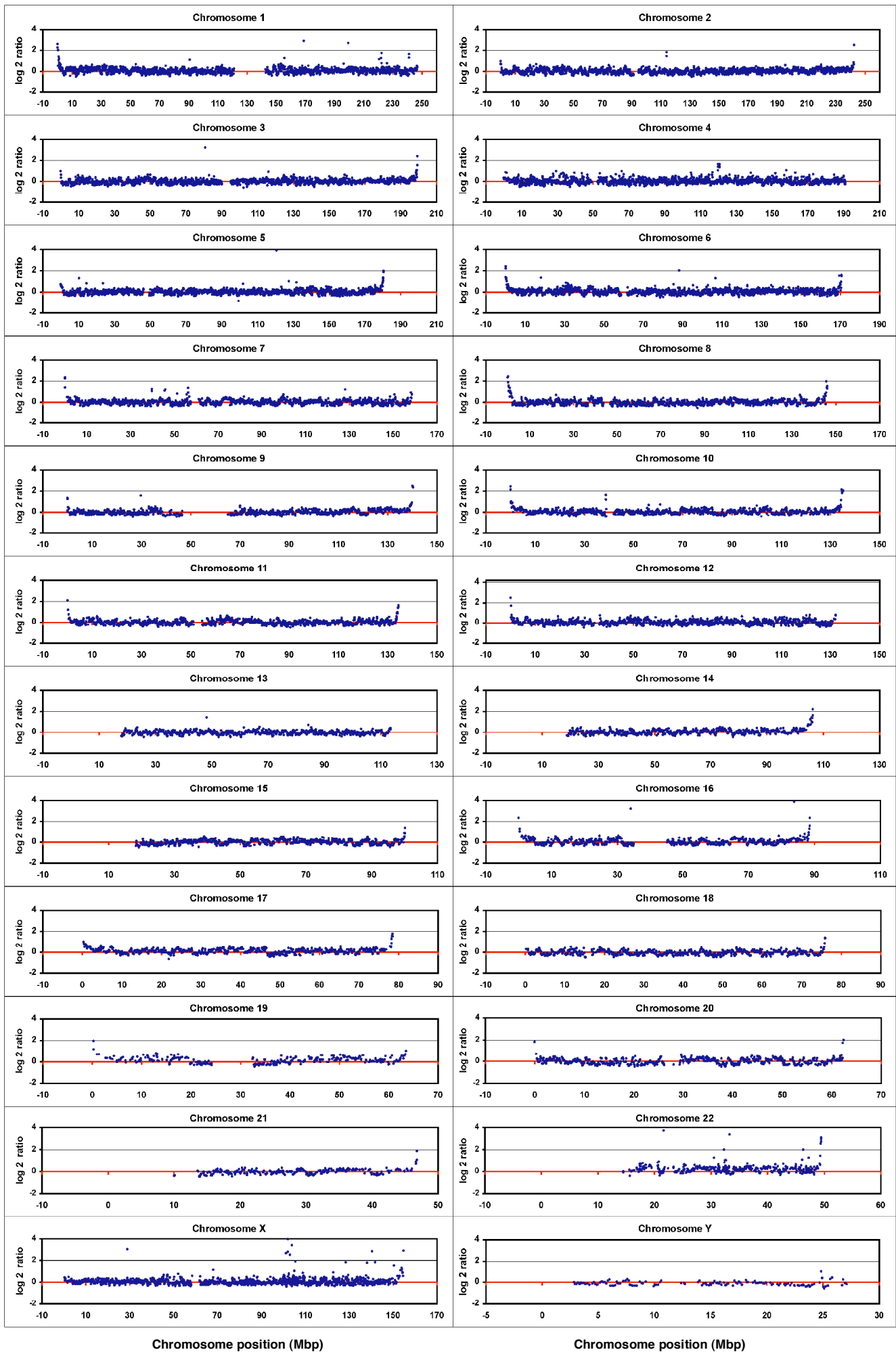
**Figure S2: ChIP-chip analysis of senescent BJ fibroblasts with anti-53BP1**



**Figure S3: ChIP-chip analysis of senescent MRC5 fibroblasts with anti- $\gamma$ H2AX**



**Figure S4: ChIP-chip analysis of senescent MRC5 fibroblasts with anti-53BP1**



Chromosome position (Mbp)

Chromosome position (Mbp)

**Figure S5: FACS analysis of BJ cells**

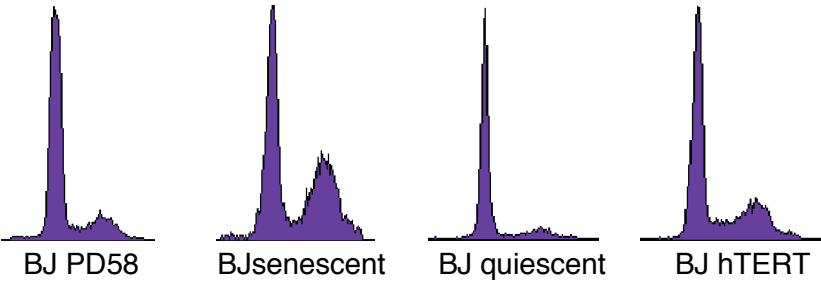
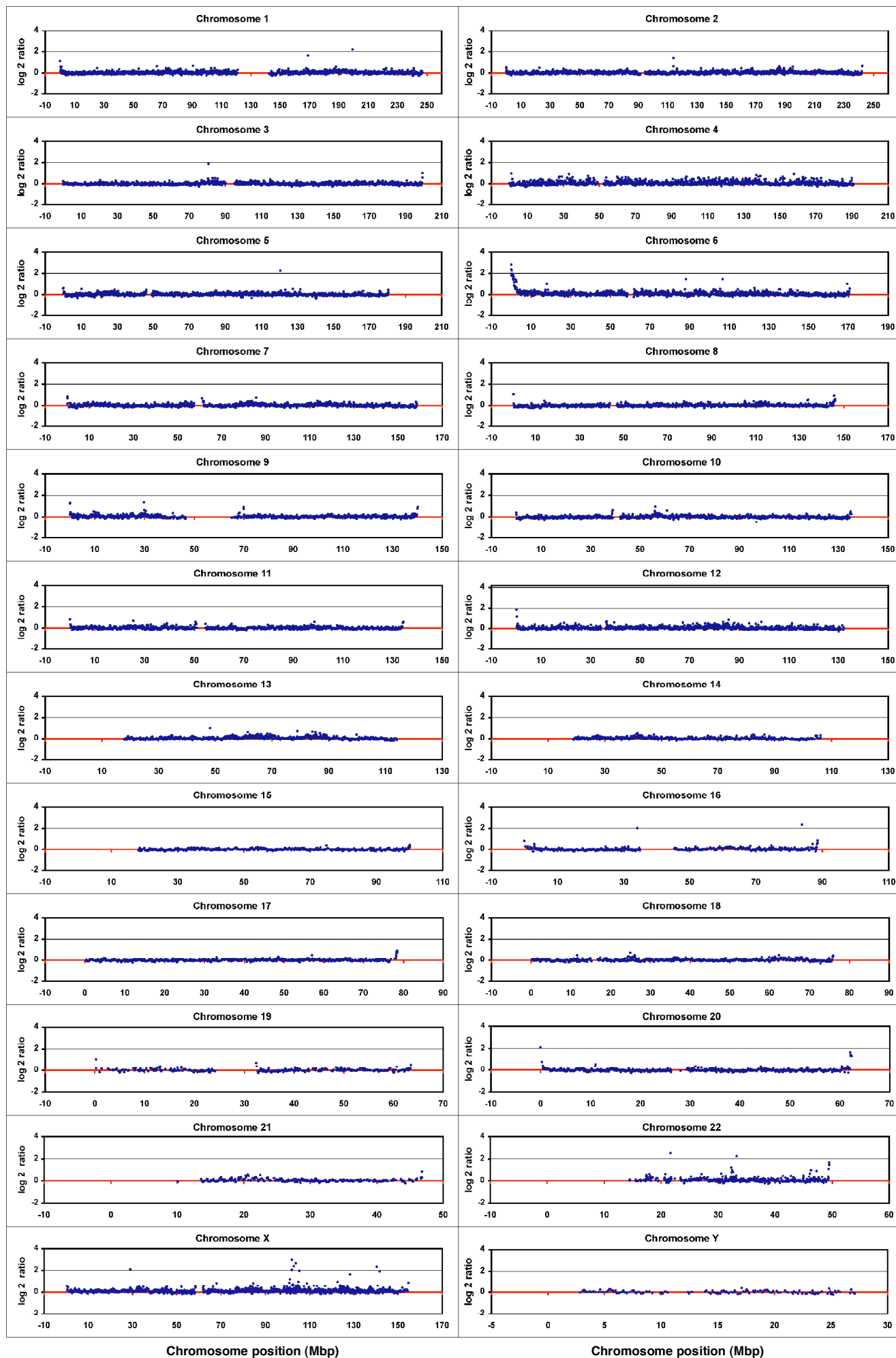


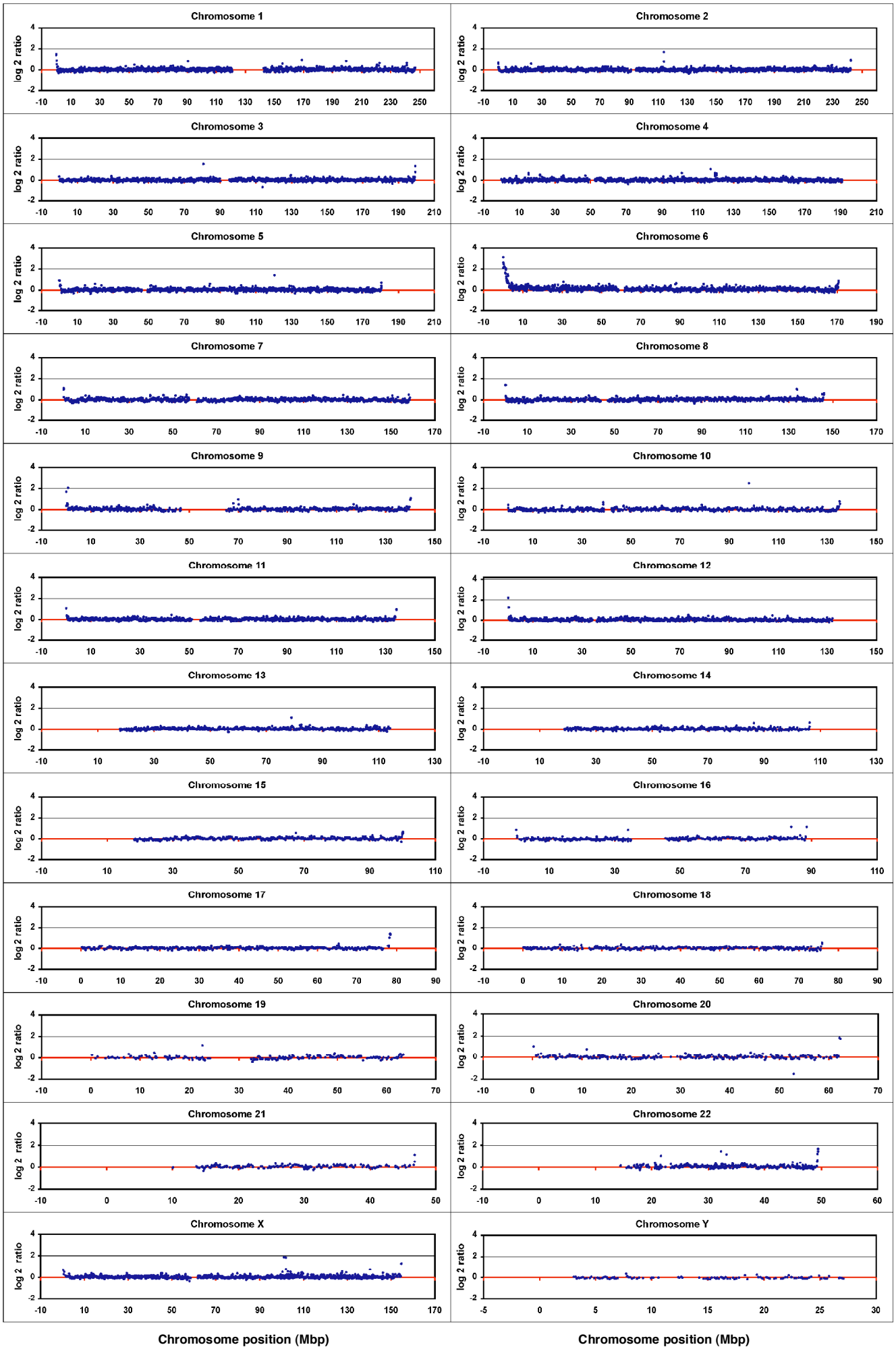
Figure S6: ChIP-chip analysis of proliferating BJ fibroblasts with anti- $\gamma$ H2AX



Chromosome position (Mbp)

Chromosome position (Mbp)

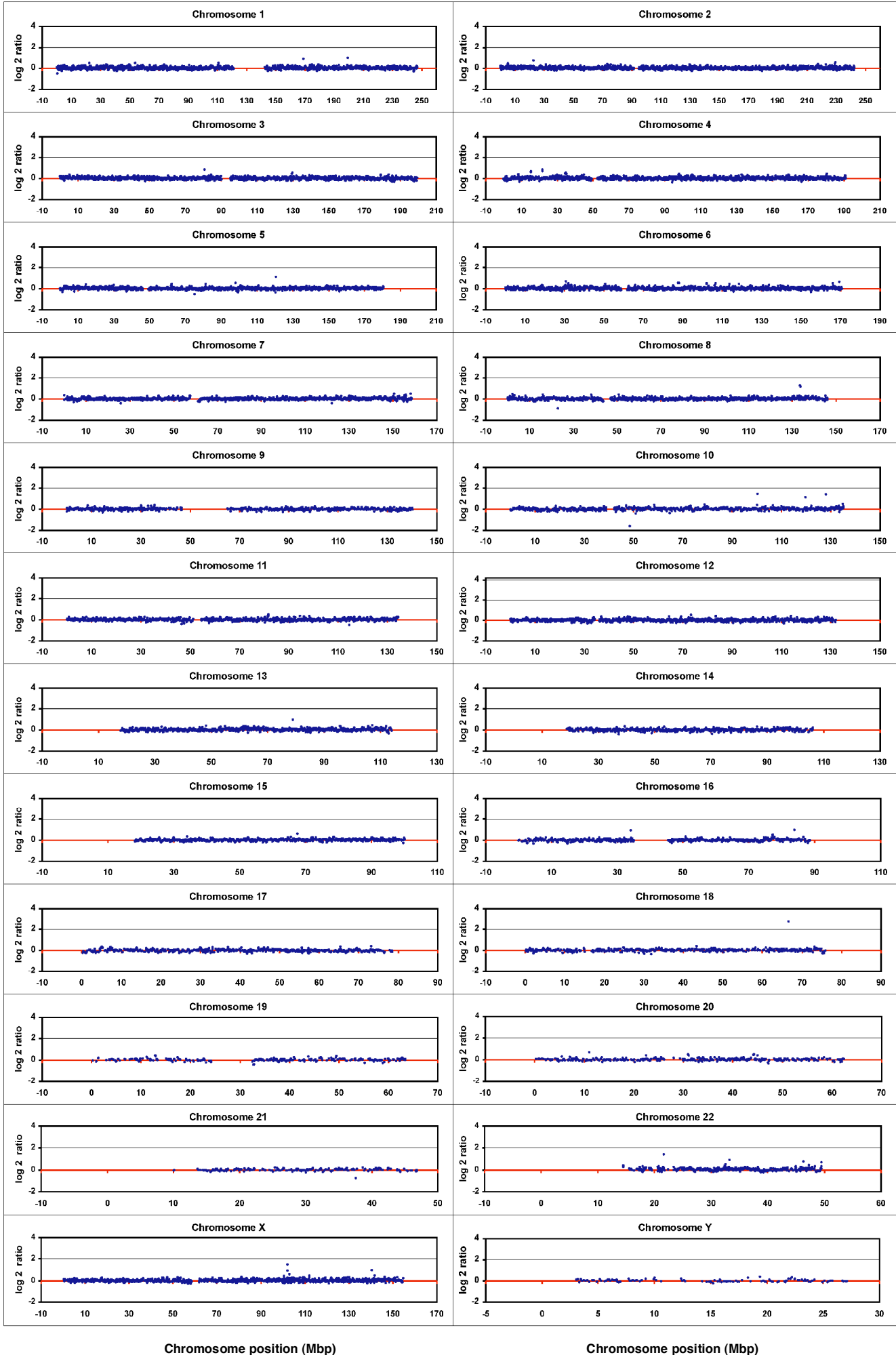
**Figure S7: ChIP-chip analysis of quiescent BJ fibroblasts with anti- $\gamma$ H2AX**



Chromosome position (Mbp)

Chromosome position (Mbp)

**Figure S8: ChIP-chip analysis of immortalized BJ hTERT with anti- $\gamma$ H2AX**



Chromosome position (Mbp)

Chromosome position (Mbp)